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For the Fiscal Year

1906-1907

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STORRS, CONNECTICUT

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State of Connecticut

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ANNUAL REPORT OF THE TRUSTEES

OF THE

CONNECTICUT AGRICULTURAL COLLEGE

AT

STORRS, CONN.

For the fiscal year embraced within the first day of October, 1906, and September 30, 1907; and for the year in other matters, December 1, 1906, to November 30, 1907.

PRINTED BY ORDER OF THE LEGISLATURE.

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1908.

PUBLICATION
APPROVED BY
THE BOARD OF CONTROL.

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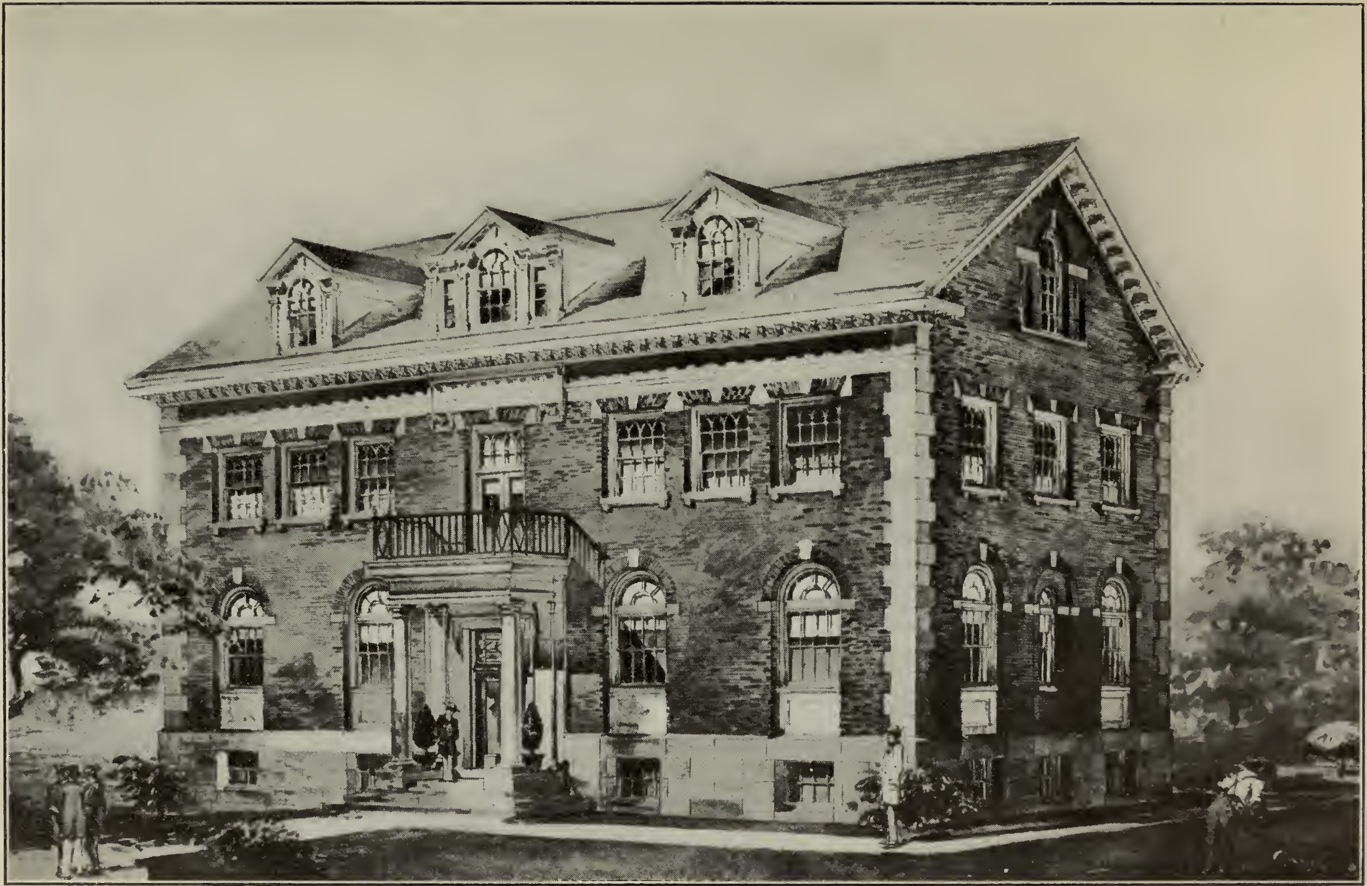

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The Storrs Agricultural Experiment Station

A DEPARTMENT OF THE CONNECTICUT AGRICULTURAL COLLEGE

Station Council

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H. G. MANCHESTER	Appointed by Board of Trustees
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CHARLES THOM	Appointed by the Station Staff
C. K. GRAHAM	Appointed by the Station Staff

Station Staff

L. A. CLINTON, M.S.,	Director
J. M. TRUEMAN, B.S.A.,	Dairy Husbandman
C. K. GRAHAM	Poultryman
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F. R. THOMPSON	Expert Cheese Maker
H. D. EDMOND, B.S.,	Chemist
CHRISTIE J. MASON, B.Agr.,	Assistant Bacteriologist

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1 A separate report of the Storrs Experiment Station is annually printed.

To His Excellency ROLLIN S. WOODRUFF,

Governor of the State of Connecticut:

I have the honor to submit herewith the Report of the Board of Trustees of The Connecticut Agricultural College for the fiscal year ended September 30th, and for the year in other matters ended November 30, 1907.

Very Respectfully,

C. A. CAPEN,

Secretary of the Board of Trustees.

Report of the President

To the Trustees of The Connecticut Agricultural College:

The development of the Connecticut Agricultural College from the small beginnings of the Storrs Agricultural School, and the more recent dominant aims of this institution, were briefly reviewed in the report of last year.

The year just closing has witnessed further advancement. Last year the enrollment of students in all courses, counting no person twice, was 227; the new catalogue will show this year 255. From Federal funds our income this year has been larger than that of last by $5,000. Our annual maintenance appropriation from the State has been increased by the last General Assembly $5,000. The General Assembly of 1905 gave us $60,000 for Storrs Hall, our model dormitory for men. To this have this year been added special State appropriations as follows: For sand-filtration, sewage-disposal beds, $2,500; for new greenhouses and a new horticulture building, $50,000. Both its increasing financial support, and the resort to it in larger numbers of those who value its training, continue to attest that the place of the College in our Connecticut educational community is well defined and warmly approved.

The standing of the College among other institutions of its kind, and among people in general of other states, appears to be equally sound and satisfactory. Its courses of study have attracted wide attention and patronage. Members of the Faculty are in much demand as lecturers. The present incumbent of the office of president has had the honor of election as a vice-president of the Association of American Agricultural Colleges and Experiment Stations, and twice has been elected chairman of the College Section of that association—an office he now holds. Also, at the recent semi-centennial celebration of the founding of the oldest agricultural college in the United States, the Michigan Agricultural College, he was selected among the speakers of the concluding day to represent "The East." The most recent territorial distribution of students, as shown by the catalogues for 1906-1908, is the broadest in the history of the College,—the enrollment in the various courses including, besides citizens of Connecticut, students from other states and foreign countries, as follows: Massachusetts, Vermont, Maine, Rhode Island, New York, New Jersey, Pennsylvania, Illinois, Canada, India, the West Indies, Ecuador, Switzerland, and Germany.

Preparation for practical farming—to be unexcelled in this, though good instruction in mechanic arts, surveying, and home economics, is also given, is the principal aim of the College.

Detailed statements covering all phases of the conduct and equipment of the College will be found set forth in the catalogue, which may be had under separate cover by those who apply for it; and in the Treasurer's Report, in the Inventories, and in the reports of various officers of instruction and administration, which are printed and presented herewith.

Very respectfully submitted,

RUFUS WHITTAKER STIMSON,
President.

REPORT OF L. A. CLINTON, M. S.

To Rufus Whittaker Stimson, President:

The work of my department during the past year has been along the same general lines as heretofore. In the fall term instruction is given in Agricultural Physics. This embraces the study of soils, soil formation, soil characteristics, the adaptability of various soils for the production of farm crops, the use of farm implements, especially those relating to soil tillage; under-drainage, farm manures, and commercial fertilizers. During the winter term instruction has been given to the senior class in Rural Economics. To the winter course students, both in dairy and poultry husbandry, instruction has been given in the management of soils, the production of farm crops, the use of commercial fertilizers. In the spring term instruction is given to the Seniors in the production of farm crops. During the present year there is a class in advanced work in Farm Management. These are regularly classified as our fifth year students.

For the purpose of instruction we need a laboratory equipped for work in soil physics, and we also need a field which can be entirely devoted to student work. This field should be near the college buildings, should be reasonably free from bowlders, and should be considered as a student laboratory field. Here instruction could be given in the use of plows, harrows, cultivators, in the planting of farm crops, in the under-drainage of farm lands, and students could have opportunity to plant and care for the various crops which thrive in this locality.

The farm department is well supplied with tools at the present time, but we are not able to use these tools to the full extent in giving instruction to our students, because of having no suitable room in which to work. At the present time the tools are stored wherever available room can be found for them. This makes it inconvenient and oftentimes impossible to have access to the various tools as they are needed.

All farm crops have been satisfactory during the past year, even though severe drought continued during July and August. By thorough tillage the crops were enabled to reach maturity.

Improvements During the Year. At the present time a new piggery is being constructed which will greatly add to the equipment of the farm department. This will enable us to conduct feeding experiments with pigs and to properly care for the animals while under experiment. The flock of sheep, while belonging to the Experiment Station, is available for work of instruction and is as valuable in connection with college work as to the Experiment Station.

Needs of the Department. The most urgent needs of the department at the present time are additional lands which can be devoted to the production of farm crops, modern fences so that crops may be protected and pasture fields properly enclosed, and a tool shed, where tools will not only be protected from the weather, but where they will be available for educational purposes.

Respectfully submitted,

L. A. CLINTON.

REPORT OF A. G. GULLEY, M.S.

To Rufus Whittaker Stimson, President:

The Horticultural Department has made some marked changes and advancement in its prospects and scope of instruction during the past year. Shortly after the season opened the division of landscape gardening was reunited to the horticultural department. This added to the duties of those in charge, but also increased the efficiency and economy of caring for the campus.

The last legislature made an appropriation to build a horticultural laboratory and range of greenhouses. The construction of the latter was begun early in October last and it will soon be ready for use. These buildings when all completed and equipped will enable those in charge of the department to do their work in a more satisfactory manner. It will put the laboratory equipment on a level with the field outfit, making the whole much more satisfactory to both teachers and students. Owing to the lack of room this department has not for several years called for new equipment other than absolutely needed for daily use. Our present expansion permits of it, and will very soon require a large supply to give us full benefit of the improvements now being made. These requirements will be presented in time to plan for them as the buildings are ready. At present we are obliged to handle nine seniors, who elected horticulture, and 26 agricultural juniors, in a small classroom and a still smaller workroom at the old greenhouse. At the best, any instruction in horticultural work given under such conditions must be very unsatisfactory. The prospective new laboratory for next year will not provide the needed space any too soon. The probabilities are that both of the above-named classes will be larger next season.

Mr. Sherman P. Hollister, my assistant the past two years, resigned to take up study again, and Mr. Alva T. Stevens was appointed assistant and instructor to fill the vacancy. Mr. Stevens brings much experience from other sections and proves a valuable addition to the department. His assistance was the more necessary on account of the addition of all landscape work to the department last spring.

As soon as the new greenhouses are equipped a man will be needed to handle them properly, and a competent one will be selected for appointment by the Board at the proper time.

Some plantings of trees were made near Storrs Hall last spring, and during the slack season last summer a portion of the grounds around the building was graded and seeded and a concrete walk was built in front. The rest of the grounds in front should be put in shape and further plantings made the coming spring. The college nursery will provide about all the trees and shrubs necessary, but some extra labor will be required. Very soon the buildings now in process of erection will also call for similar development.

The light apple year and loss of the peach crop made the returns from the orchards much less than last year. The outlook at present is that the apples and probably the other fruits will return considerable income the coming season.

All of which is respectfully submitted,

A. W. GULLEY.

REPORT OF J. M. TRUEMAN, B.S.A.

To Rufus Whittaker Stimson, President:

I hereby present the report of the Dairy Department for the year ending October 31, 1907. I cannot give a full account of the year's work as I have only had charge of the department since April 1st. The instruction given during the spring term was substantially as outlined in the catalogue. During the summer the work in the creamery and in the dairy barn was carried on as usual. Some improvements were made in the creamery in the way of painting and renovating. The old wooden sterilizer was removed and a cement one built in its place which is proving satisfactory. The place for receiving milk, which had only been an open platform in one corner of the engine room, was made into a sanitary room by the construction of walls made of cement on expanded metal lath.

The duties of the butter-maker were increased by requiring him to give the instruction in the practical work in the creamery and farm dairy, and Mr. Delos L. James from the University of Illinois was secured to fill the position. He began work August 1st.

Respectfully submitted,

J. M. TRUEMAN.

REPORT OF CHARLES K. GRAHAM

To Rufus Whittaker Stimson, President:

The regular poultry course consists of lectures twice a week to each class during the fall term, and practical work in the spring term; each student being required to kill and dress a certain number of birds, also to manage an incubator and brooder. About twice as much time has been required for this work during the past year as during previous years owing to poultry being placed in the Freshman as well as in the Junior schedule.

Last spring we had two short courses in poultry; the first beginning January 4th and the second on February 15th. As students taking these courses are anxious to secure as much as possible in the six weeks they are with us, we have tried to give them all of our time, commencing at eight o'clock in the morning and keeping them busy until five o'clock in the afternoon. This, together with the routine work of the department, is more than an instructor can be expected to do for any length of time and give satisfaction.

Our incubator cellar and class room are not large enough to accommodate at one time as many students as attended last year in the two courses. Still, I would recommend that until such time as larger rooms can be given us, only one Short Course be offered each spring, and that the number of students be limited.

There are on the poultry plant at present about six hundred (600) fowls, consisting of seventeen (17) varieties. Several of these varieties are being kept for instruction or demonstration work only, and consist of a few birds of each, but the main portion of the flock is made up of the leading utility breeds of New England, and these are used chiefly for experimental work.

A new poultry house equipped with trap nests was built last fall. This gives us accommodations for about one hundred and fifty (150) more birds, and furnishes excellent facilities for studying the peculiarities of breeding.

Respectfully submitted,

C. K. GRAHAM.

REPORT OF E. H. LEHNERT, B.S., D.V.S.

To Rufus Whittaker Stimson, President:

I submit herewith a report of the work carried on during the past year in the departments under my charge.

The course in Veterinary Science has not been materially changed either in number of hours or nature of work for the past three years. The time allotted for this course—while not as ample as could be desired—is sufficient to give the students a good knowledge of the common diseases and accidents of domesticated animals, with the usual method of treatment, when the skilled practitioner cannot be secured.

We make no endeavor to turn out full-fledged veterinarians, but rather on the other hand, to instill into the minds of students an adequate conception of the true value of the professional man, so that they may be able to judge when the attendance of a skilled practitioner is needed, and not attempt the treatment of a case which is beyond them.

In spite of the fact that our teaching has been entirely along this line, it is a pleasure to note that during the past six years no less than seven men, after completing our course here, have entered professional veterinary schools.

The Chemical Department, of which I have had charge for the past two years, has yielded fairly satisfactory results on the whole for the time allotted. We would do well, in my opinion, to increase the number of hours one-third if possible, as at present the time is too short to cover as much ground as is desirable.

At the beginning of the winter term we had in attendance fifty students, in the advanced and elementary chemistry courses. This large number in our cramped quarters would have been but poorly handled but for the valuable assistance of Miss Donovan.

The course in Elementary Science with the first year students has been conducted along lines laid down a year ago, i. e., we endeavor to familiarize them with the metric system in all its phases, and also acquaint them with the elementary fundamental principles of physics; thereby laying a foundation for their work in physics and chemistry the year following.

Respectfully submitted,

E. H. LEHNERT.

REPORT OF A. F. BLAKESLEE, Ph.D.

To Rufus Whittaker Stimson, President:

The work in the elementary course in Botany has occupied the same periods as in previous years. The size of the class, however, has necessitated a division into two sections for all laboratory work. The desks with drawers that lined the side of the room have been replaced by shelves erected at the end of the laboratory. By this means additional table space has become available and the tables are better lighted for microscopic and other laboratory work. This arrangement has somewhat alleviated the cramped condition in the laboratory, but the laboratory is inadequate in size and equipment for the work that should be given and we are looking forward expectantly to new quarters in the near future. In the fall term a laboratory and lecture course was conducted on the lower forms of plant life. In fourth year Botany there is one student, and there is one also in fifth year Botany.

The department has purchased an autoclav, an incubating oven and a sterilizer, which have been used by the advanced students in studying cultural methods with the mould fungi. In addition I have been able to do a little research work in continuation of my investigations in the mould fungi and at the meeting of the Botanical Society of America held in Chicago during the Christmas recess I read a report of investigations of a mould parasitic on squashes and not uncommon in Connecticut. A teacher's first duty is his teaching, but with the facilities at hand I hope to be able to find opportunity outside of instruction for further original research in my special field.

As Director of the Summer School, I wish to report the hearty co-operation of members of the Faculty and Experiment Station staff here during the summer in making the school a success. The Summer School this last summer was the largest in its history and the students as a body seemed appreciative of the opportunity that Storrs offers for outdoor enjoyment and the study of nature at first hand.

Respectfully submitted,

ALBERT F. BLAKESLEE.

REPORT OF W. M. ESTEN, M.S.

To Rufus Whittaker Stimson, President:

The course in Meteorology extends through the fall and winter terms. The members of the class who have not taken or had the equivalent of Chemistry I. are able to take only the first half of the course. This affects about half of the class. The first term's work is preparatory to the second term's work, and those required to take Chemistry I. in the winter term, which meets at the same hour of Meteorology, lose the real value of the instruction intended to be given as a complete course. The course given practically follows the outline given in the catalogue, directing especial attention to the work of the Weather Bureau, how to obtain information concerning the daily weather forecasts, the methods of predicting and preventing frosts, forecasting of storms by local signs, beginning, extent and end of the growing season; in short, to apply the principles of Meteorology to the science and practice of agriculture.

The instruction in Bacteriology is not confined to Dairy Bacteriology, but takes a wider scope in Agricultural Bacteriology, treating the relation of bacteria to the entire agricultural industry. A study is made of the relation of bacteria in the soil to fertility, in farm products and to human diseases.

Practical Bacteriology was a course originally outlined to be given in 36 hours in the fall term. The large number of students made it necessary to reduce the course to eighteen hours. The allotted time cut in half affords only time enough to make a very brief study of real bacteriology. A serious difficulty is experienced in the necessity of spending too much time in teaching some elements of chemsitry, the use of weights and measures in the metric system, the use of Centigrade thermometers, buretts, etc., all of which must be used, as they are standards for bacteriological work. About twelve of the class had not taken chemistry. The addition of a steam sterilizer and a set of balances have greatly facilitated the work in the course.

Agricultural Bacteriology is a very difficult subject to teach even to advanced and well trained students, on account of the strange and unfamiliar terms which must be used. These terms require defining and considerable explanation. The course is given in three divisions.

The first division, Soil Bacteriology, is given in the fall term. It is a subject rather difficult for the average student to understand because it deals largely with chemical changes in the soil caused by bacterial activity. This subject, though somewhat mysterious, is proving itself to be of more importance than almost any other branch of bacteriology.

The second division, Dairy Bacteriology, is studied in the winter term. Emphasis is placed on the production of sanitary milk, preventing disease germs getting into milk, the agency of bacteria in the ripening of cream and cheese.

The third division, Bacteria and Disease, with some minor subjects, is given in the spring term.

Dairy Bacteriology for the Seniors is given by one lecture and three laboratory hours a week, as formerly, with no material change.

The Short Course Dairy students have one lecture a week and enough practical work to illustrate how numbers of bacteria in milk are determined and how lactic acid starters for cream ripening are obtained.

Respectfully submitted,

W. M. ESTEN.

REPORT OF CHARLES A. WHEELER, M.A.

To Rufus Whittaker Stimson, President:

My work during the past year has covered the same ground as reported a year ago, and I need comment only upon the modifications which have been made.

Physics. I have given a generous amount of time to the study of ways for improving this course. As a result I have changed the text-book, introduced separate-leaf experiments, taken the class to see various machines illustrating physical principles, and have planned a thorough review.

The text-book now used is Hoadley's, published by the American Book Company. The book is well written, is illustrated by a considerable number of cuts, and at the end of each chapter is placed a number of suggestive, practical questions. Since the beginning of the present term a revision of Gage's Principles of Physics has been issued by Ginn & Co. In a cursory examination of this book I have seen that some objects of great importance in our teaching are more fully treated than in any other text-book, and this fact, together with its being up-to-date, will be carefully considered in planning next year's program. This course will cover the mechanics of solids, liquids, and gases, sound and heat, pp. 37-247, and will leave magnetism and electricity and light to be studied, if at all, in the third-year class.

A set of separate leaf experiments, twenty-one in number, was purchased for each student from the L. E. Knott Apparatus Co., Boston, and was supplemented by fourteen other experiments having a more particular bearing on our agricultural learning. These fourteen experiments were written, some by the instructor and some by students working under my direction; were copied in hektograph ink and printed on the hektograph as an exercise for the student, and to give a supply for the class of twenty-three students. The experiments are as follows:

1. Curve Plotting.
2. Uniformly Accelerated Motion.
3. Faucet—Size of falling stream of water related to velocity.
4. Equilibrium—Three parallel forces in one plane.
5. Equilibrium—Balanced stick and blocks.
6. Parallelogram of Forces.
7. Momentum.
8. Coefficient of Friction, on Inclined Plane.
9. Coefficient of Friction, Sliding on Level Board.
10. Inclined Plane.
11. Pulleys.
12. Surface Tension.
13. Liquid Pressure.
14. Specific Gravity—Solid heavier than water.
15. Specific Gravity—Solid lighter than water.
16. Specific Gravity—Liquid balancing columns.
17. Boyle's Law.
18. Sound, wave length of.
19. Sound, velocity of, in open air.
20. Thermometry.
21. Expansion.
22. Humidity.
23. Radiation.
24. Dew Point.
25. The Planimeter.
26. Falling Bodies.
27. Law of Reflection.
28. The Hektograph.
29. Specific Gravity—The Cartesian Diver.
30. Mercurial Barometer.

31. Air Testing with Wolpert's Apparatus.
32. Size of Molecules.
33. Specific Gravity of Milk by Balancing Columns.
34. Osmosis.
35. Temperatures.

As I pointed out in my last annual report, we have not equipment enough so that every student may perform the same experiment at the same time, and all things considered, I am inclined to think that it is preferable that some should work on one experiment, some on another,—at least this method is less expensive. Whether one method or the other is better depends upon the instruction, whether it is oral or written. If the directions for performing an experiment are oral, of necessity the teacher should instruct all at once, but if written, as in this case, the teacher has to give only such individual help as may be asked for. There are educators who think, and I agree with them, that the student masters the experiment best when he can read over carefully his instructions and work them out thoroughly for himself. This method we have used successfully for years in the teaching of bookkeeping, and it is being used in courses in surveying where a pocket manual and text-book combined give explicit directions for field work. The assignment of separate experiments and the tabulating of work by each student for himself I need but mention. It is sufficient to say that I regard the separate leaf experiment set as an important improvement in my course.

By way of making the study of Physics more interesting I have sought such practical applications of physical principles as were easily available. For example, the class visited the dairy and separated 125 pounds of cream with a hand separator in 15 minutes, and, later, found by computation, that the centrifugal force exerted on the milk in 20 seconds was equivalent in this case to the force of gravity acting for 16 hours. On October 17th a majority of the class, taking advantage of a one-day excursion to Boston, visited with me the public library, the battleship Illinois, in dry dock at the Navy Yard, and the telephone exchange, and went through the tube under Boston harbor to East Boston. Compressed air, rarified air, inclined planes, pulleys, capstans, cranes, and other machines, were found in great abundance, and to see them in actual use was very instructive and pleasurable. The Illinois holds the President's medal this year for good marksmanship; the telephone exchange is the largest in New England. The mechanisms and interesting features were pointed out by the manager's assistants at the exchange, by a sailor on shipboard, by an attendant at the public library, and by Mr. Paul W. Graff, C.A.C., '05 and '07, at the Harvard Botanical Museum, which we also visited.

The review will include a re-reading of the text-book in connection with a series of five sheets of hektographed questions and notes.

> (To the Reader: The hektograph referred to above is a device for copying writing, and is easily made at home, materials casting about 50 cents. Upon application to the author, he will gladly furnish directions for making, gratis.)

The aim in Physics has been to make the course instructive, interesting, and practical. The results are gratifying, and yet there is room, I can see, for further improvement.

Bookkeeping. In the absence of a Professor of Dairying last winter, and at the request of the Short Course students in dairying, a beginning was made in dairy bookkeeping. That the instruction might be practical and pertinent to conditions in Connecticut, it seemed best to model the work closely upon local lines. I visited a successful creamery in the central portion of the state and copied the accounts of January, this year, and used these for purposes of instruction. As this course will be given during the coming winter I propose to put it into better form, making a double-entry system.

The General Assembly this year appropriated $2,500 for filter beds and a sewerage system, (discussed at length in my last report). The beds were ready for use in June, and the College sewage was then turned upon them. The working of the beds has been most satisfactory. The effluent is clear, nearly odorless, with scarcely any sediment, and has been drunk by sheep in preference to brook water (being saline), without injury to them. The embankments have been graded and the inside banks turfed. The underdrains along the sewer lines are removing ground water nearly every day in the year, and no sewage has appeared through them. There has been expended to date the sum of $2,276.20, and the balance is sufficient to complete the work. The cost of maintenance of the beds when in use will be three to five dollars a month. It is not expected that they will be used in winter, but they can be if necessary.

It has been my fortune this year to assist in some measure in the preparation of a book on Plane Surveying, and to teach surveying one month in the Yale Forest School, in a summer course given at Milford, Penn. I have also made a compass survey of the College's Gilbert farm at Georgetown.

Respectfully submitted,

CHARLES A. WHEELER.

REPORT OF ALBERTA TULLIA THOMAS

To Rufus Whittaker Stimson, President:

I. Care of Grove Cottage. The routine of the life in Grove Cottage continues the same from year to year. The students care for their own rooms and take much pride in the arrangement of them. The standard of order and cleanliness is high.

II. The Chaperonage of the Young Women. Every possible effort is put forth to make the atmosphere of Grove Cottage homelike. Our aim is to send out from the College self-controlled, self-respecting young women. The ordering of our daily life is arranged with this thought uppermost. There has been no sickness at Grove Cottage during the past year.

III. Home Economics. The courses of study in this department are described in the catalogue under Courses No. 7, 8 and 9. The aim and scope of the work is the same as outlined in the previous report. No changes worthy of mention have been made.

That the interest in the various branches taught in this department is steadily increasing is shown by the increase in the elective work. All regular students have elected courses which call for the greatest number of hours in Home Economics in preference to other courses offered to them. All special students are taking from six to twelve hours per week in this department.

Respectfully submitted,
ALBERTA T. THOMAS.

REPORT OF EDWINA MAUD WHITNEY, Ph.B.

To Rufus Whittaker Stimson, President:

Library. The policy of previous years has been maintained in the library department during the present year. At a sacrifice of needed light and room three new stacks have been erected, giving place for the addition of some 400 volumes. The attention of the Trustees is, however, respectfully drawn to the fact that unless the library is to become a mere stack room, with no tables for reading or study ing, new quarters must be found somehow, somewhere, for the housing of the books.

We have accessioned from November 1, 1906, to November 1, 1907, 225 volumes, of which 66 are public documents. This gives a total of 10,760 books now in use upon our library shelves.

German. The fact that the present beginning German class is the largest since the introduction of that language into the College, proves the wisdom of granting German a regular place in the College curriculum. If the schedule could be arranged so that it could be elected by students of the regular agricultural courses, we have reason to believe that many more would avail themselves of the opportunity to gain a practical knowledge of this useful modern language.

Respectfully submitted,
EDWINA WHITNEY.

REPORT OF GEORGE HERBERT LAMSON, Jr., M.S.

To Rufus Whittaker Stimson, President:

My work during the past year has been varied in its nature. I have, however, tried to systematize the work in Entomology so that the students may get a thorough drill in the several courses of that subject. The placing of the work in the spring of the third year and the fall of the fourth year gives the students the most favorable seasons for the study of this subject.

Last year two of the sixth-year students took special work in Forest Entomology and others desire similar work next year.

The collections have been rearranged and enlarged. They cannot be said to be large when compared with those of older institutions, but they constitute good "working collections" with the most important specimens for the various courses given.

The knowledge gained during the last Summer School regarding the methods best adapted for use in these courses was most valuable and should be of assistance in shaping work in the future.

There is, I think, an opportunity for us to fill another need of the teachers. Some Boards of Education complain that teachers do not teach the subject of Hygiene satisfactorily, although the laws of the State demand that a certain number of hours be devoted to the subject. The reason given why this subject is neglected is that it is not a part of the training of many teachers, so that they merely comply with the law in a perfunctory manner.

It is true that the scholar should be warned against the danger of using alcoholic drinks. It is, however, just as essential that he should be warned against such a disease as tuberculosis, which is so common, yet so unnecessary. The skillful surgeon may by an operation lengthen the life of one man, yet, I believe, a teacher in the common schools may by careful instruction lengthen the lives of many.

This work must most certainly begin with the teacher of our common schools.

Respectfully submitted,

GEORGE H. LAMSON, JR.

REPORT OF HERMAN DEANE EDMOND, B.S.

To Rufus Whittaker Stimson, President:

Instruction in Military Science and Drill may be divided into three periods; the fall term is devoted to close and extended order work; the winter term, because of the lack of drill room, is spent in perfecting the cadets in the manual of arms and rifle drill; and during the spring term considerable time is spent in the practice of ceremonies, guard mounting and guard duty and the method of attack and defence, besides perfecting the men in all company movements. Some time is spent in target practice, but because of the danger to men working near the rifle range the work has been very much handicapped this past year.

The introduction last year of the rifle drill exercise given in Butts' Manual of Physical Drill has added interest to the indoor drill and at the same time the physical development of the cadets has been promoted.

A Cadet Band has been organized, which adds life and interest to all ceremonies and outdoor drills.

During the winter term the second-year class has one recitation period a week in drill regulations. To provide for men who enter the third-year class, a class was organized of third-year men which met once a week during one of the regular drill periods. The work was optional and no examination was required. This class will be continued and no cadet, who has not studied and passed a satisfactory examination in drill regulations, will receive appointment as an officer in the cadet company.

This department has charge of the discipline in the dormitories through the cadet officers, who are responsible for the enforcement of all dormitory rules.

Respectfully submitted,
HERMAN D. EDMOND.

REPORT OF J. N. FITTS, B. Agr.

To Rufus Whittaker Stimson, President:

The work of the past year has been similar to that of previous years. The practical side of Mechanic Arts has been taught in preference to the theoretical. Many useful articles were made in wood and iron, and were on exhibition at Commencement time. A larger exhibition may be expected next Commencement.

This year opened with ten students electing third-year work in Mechanic Arts, with two students electing fourth-year work in Mechanic Arts, with seven students taking special work in Mechanical Drawing, and with twenty-four students taking practical work under the Mechanical department as required in the Agricultural courses.

The wood working equipment has been moved from Whitney Hall to more commodious quarters in the basement of the main building. Bench room and tools have been added for eight more students.

The Trustees have also seen fit to start a small machine shop in the same room, and the following equipment is now being installed for the benefit and instruction of the students: One 12 h.p. Alamo gasolene engine; one 11x36 Star engine lathe with complete equipment for working both wood and metal; one Crown wood turning lathe; one grindstone; one two-wheel emery grinder; one blacksmith drill, and one wood planer, with belts, shafting, tools, etc., for their operation.

The teaching of third-year Physics has been transferred to this department.

The general care and repair of the buildings, heating apparatus and water supply have been superintended by this department as in former years.

Respectfully submitted,

J. N. FITTS.

REPORT OF ABBY M. HICKS

To Rufus Whittaker Stimson, President:

The work in this department is much the same as in previous years. Music is elective, and all instruction is private.

Piano instruction is carried on after the method of the New England Conservatory Normal Course, adapted to meet the needs of the different pupils.

In voice culture, the Italian method of voice placing and tone building is used.

Most of the young women study both voice and piano, and are doing creditable work. Many of the young men have shown considerable interest as well as ability.

The organization of a chorus is under consideration. This is to be in addition to the Glee club.

Having assumed the duties of this position in the middle of the year, the public recitals will, of necessity, be later than in former years.

The Department of Music in a school devoted to scientific and practical agriculture and allied subjects cannot be professional. Its aim, primarily, is to elevate the taste of the student along musical lines and to bring him to an appreciation of good music.

Respectfully submitted,

ABBY M. HICKS.

REPORT OF ORPHA CECIL SMITH

To Rufus Whittaker Stimson, President:

My work as instructor of English, Elocution and Gymnastics in the College began with the opening of the present year. This report will be a brief outline of the work intended for the College year.

I. **English.** Students in the first year are required to spend five hours a week in the study of English. This year the department has been divided into two branches,—three hours being devoted to grammar and the remaining two hours being devoted to the study of English Literature. We hope by this method to promote a love of good reading, together with a grounding in grammar, which will prepare the students for the more advanced courses of the second year.

II. **Elocution.** All regular students, with the exception of the Senior class, are required to take classroom instruction in Elocution throughout the year and to appear in rhetoricals once each term. I expect to carry on the work very much as it has been carried on in past years, the aim being to combine the three natural languages of man—verbal expression, vocal expression and pantomimic expression,—and thus promote good delivery. The text-books used will be the same as in past years, with the addition of Dr. Curry's new book, "Foundations of Expression," as a reference book in technique for the third-year class. I look for great improvement in this department.

III. **Gymnastics.** Upon beginning my duties in September, I found that the apparatus in the girls' gymnasium, Grove Cottage, was badly out of repair from disuse. It has now been repaired and a few simple pieces have been added. The young ladies are required to take gymnastics three hours a week, and I find that they take great interest in the work. I conduct the classes according to Baron Posse's system of Swedish Gymnastics and aim to establish a normal condition both in health and development.

Respectfully submitted,

ORPHA CECIL SMITH.

REPORT OF AUSTIN F. HAWES, M.F.

To Rufus Whittaker Stimson, President:

The course in forestry begins November 5th and extends to December 20th, covering a period of six weeks of instruction. The students taking this course are seniors, including nineteen men and one woman. The instruction in this course will include the consideration of botanical and silvical character of the important trees of Connecticut, methods of estimating wood and lumber, consideration of prices obtainable for forest products, methods of lumbering, improvement thinnings, plantations, and protection from fire.

As the only land available for forestry work is the farther small woodlot, it is very desirable that more land should be acquired for this purpose. If the college should not find it feasible to make such a purchase, it might be possible to secure a clause in the next appropriation for state forests designating an appropriation of one thousand dollars for the purchase of such land near the college, which could be used under the supervision of the State Forester for the demonstration work of the forestry class.

Yours respectfully,
AUSTIN F. HAWES.

Inventories

September 30, 1907.

FARM

Live Stock	$1,929.00	
Farm Products	2,666.50	
Machinery and Tools	2,066.55	
		$6,662.05

HORTICULTURE AND LANDSCAPE ARCHITECTURE

Stock, Tools, and Equipment		$1,604.30

DAIRY AND CREAMERY

Live Stock	$3,920.00	
Equipment and Supplies	3,887.00	
		$7,807.00

POULTRY

Live Stock	$855.25	
Equipment and Supplies	897.48	
		$1,752.73

BOTANY AND FORESTRY

Equipment and Supplies		$894.50

BOARDING

Equipment and Supplies		$2,259.09

HORSE BARN

Horses	$3,700.00	
Harnesses, Wagons, Feed, Etc.	1,023.00	
		$4,723.00

MECHANICS

Equipment and Supplies		$1,499.25

NATURAL HISTORY

Apparatus	$1,025.00	
Museum	1,236.00	
		$2,261.00

MATHEMATICS

Instruments, Models, Etc.,		$1,028.69

VETERINARY SCIENCE AND PHYSIOLOGY

Intruments, Models, Etc.,		$1,917.45

BACTERIOLOGY

Apparatus		$991.72

CHEMISTRY AND PHYSICS

Apparatus and Chemicals		$2,993.17

OTHER EQUIPMENT

Military	$578.65	
Grove Cottage	2,614.00	
Library Books and Furniture	21,000.00	
Local Telephone System	350.00	
Fire Extinguishers	400.00	
Wagon Scales	150.00	
Furniture and Janitor's Supplies	4,751.79	
Office Furniture, Supplies, and Miscellaneous Equipment	6,900.00	
		$73,138.39

LANDS AND BUILDINGS

College Farm and Campus	$15,000.00	
College Buildings	224,000.00	
Farm, Buildings and Equipment at Georgetown, Conn.,	10,000.00	
		$249,000.00
		$322,138.39

TREASURER'S REPORT.

Report of D. W. Patten, Treasurer of the Connecticut Agricultural College, from Oct. 1, 1906, to Sept. 30, 1907

	RECEIPTS			DISBURSEMENTS		
	Cash	*Transfers	Total	Cash	*Transfers	Total
Annual State Appropriation (State Fund)....	$20,000.00	......	$20,000.00	......	......	......
Endowment Income (Land Grant Fund)......	6,750.00	......	6,750.00	......	......	......
Annual Federal Appropriation (Morrill Fund)	30,000.00	......	30,000.00	......	......	......
Hicks Prize Fund..........................	60.00	......	60.00	$ 68.00	......	$ 68.00
Interest..................................	312.75	......	312.75	......	......	......
Students' Deposits......	2,350.00	......	2,350.00	......	......	......
Miscellaneous Receipts................	199.25	......	199.25	......	......	......
Salaries—Officers.........................	......	......	......	†5,240.30	......	5,240.30
Instructors........................	......	......	......	23,175.98	......	23,175.98
Lecturers..........................	......	......	......	503.85	......	503.85
Departments:—						......
Library—New Books.....................	......	......	......	225.26	......	225.26
Periodicals.......................	......	......	......	192.50	......	192.50
Librarian's Student Assistant....	......	......	......	64.35	.....	64.35
Supplies..........................	......	......	......	7.35	......	7.35
Farm......................................	1,453.00	4,626.30	6,079.30	5,673.65	$ 5.88	5,679.53
Dairy and Creamery........................	4,115.52	3,663.48	7,779.00	7,876.15	1,199.53	9,075.68
Poultry...................................	637.70	1,242.59	1,880.29	1,994.30	42.86	2,037.16
Horticultural.............................	1,576.99	182.05	1,759.04	2,501.31	357.68	2,858.99

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*"Transfer" amounts represent transactions among the different College departments and cover such items as labor and materials furnished one department by another.

†The salaries here included are those of the secretary, the treasurer, and the auditor of the Board of Trustees, and of the president, the librarian, the chief clerk, the stenographer, and the bookkeeper of the College.

TREASURER'S REPORT—(Continued)

	RECEIPTS			DISBURSEMENTS		
	Cash	*Transfers	**Total**	Cash	*Transfers	**Total**
Departments:—						
Gilbert Farm: Endowment	$7,853.27	......	**$7,853.27**	......	......	......
Gilbert Farm: Miscellaneous	2,515.16	.....	**2,515.16**	$7,789.69	......	**$7,789.69**
Forestry, Landscape and Botany, including care and permanent improvement of grounds	......	$ 3.00	**3.00**	301.00	$ 222.19	**523.19**
Horse Barn	974.15	2,829.70	**3,803.85**	3,181.02	618.04	**3,799.06**
Boarding	16,226.40	1,942.81	**18,169.21**	12,738.80	5,834.35	**18,573.15**
Military	......	......	......	298.02	2.37	**300.39**
Buildings:—						
New Poultry Building	. ....	......	......	193.10	13.79	**206.89**
Horticultural Department Fruit Cellar	......	......	......	131.61	......	**131.61**
Dairy Silo	......	......	......	82.00	......	**82.00**
Breakage	230.16	......	**230.16**	202.79	27.37	**230.16**
Repairs, additions and improvements not elsewhere included	......	......	......	2,940.98	166.25	**3,107.23**
Architect's Fees, Storrs Hall	......	......	......	342.12	......	**342.12**
Expenses in connection with New Horticultural Building	......	......	......	14.28	......	**14.28**
Rent	1,079.01	......	**1,079.01**	495.69	......	**495.69**
Fuel and Light	2,622.41	594.06	**3,216.47**	6,289.59	1,414.95	**7,704.54**
Equipment—Repairs, additions and improvements not elsewhere included	.....	.....	......	766.24	1.65	**767.89**

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*"Transfer" amounts represent transactions among the different College departments and cover such items as labor and materials furnished one department by another.

TREASURER'S REPORT—(Continued)

	RECEIPTS			DISBURSEMENTS		
	Cash	*Transfers	**Total**	Cash	*Transfers	**Total**
Facilities for Instruction:—						
Apparatus	......	......	......	$255.96	......	**$255.96**
Supplies	......	......	......	496.75	$230.16	**726.91**
Insurance	......	......	......	312.73	......	**312.73**
Students' Stationery and Supplies	$1,894.02	......	**$1,894.02**	2,769.19	......	**2,769.19**
Students' Laundry	1,462.63	......	**1,462.63**	1,289.69	......	**1,289.69**
Medicines	31.25	......	**31.25**	36.75	......	**36.75**
Pew Rent for Students	......	......	......	433.33	......	**433.33**
Administration, general:—						
Freight and Express	......	......	......	262.97	......	**262.97**
Cartage and Transportation	......	......	......	95.50	3,126.20	**3,221.70**
Entertainment of Guests	......	......	......	34.14	831.94	**866.08**
Commencement Expense	......	......	......	121.24	......	**121.24**
Telephones and Telegrams	32.42	......	**32.42**	202.31	......	**202.31**
Traveling Expenses, including attendance at agricultural fairs, farmers' meetings, educational conventions, trustees' meetings	......	......	......	1,135.09	......	**1,135.09**
Printing	......	......	......	859.13	......	**859.19**
Postage	......	......	......	400.59	......	**400.53**
Office Stationery and Supplies	......	......	......	289.02	......	**289.02**
Advertising	......	......	......	167.65	......	**167.65**

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*"Transfer" amounts represent transactions among the different College departments, and cover such items as labor and materials furnished one department by another.

TREASURER'S REPORT—(Continued)

	RECEIPTS			DISBURSEMENTS		
	Cash	*Transfers	Total	Cash	*Transfers	Total
Administration, general:						
Laundry for guest rooms and employees...	......	......	......	$85.42	......	$85.42
Grove Cottage Laundry and Supplies......	......	......	......	93.27	......	93.27
Janitor Work and Supplies...............	......	......	......	2,023.82	......	2,023.82
Engineer, plumber and fireman............	......	......	......	1,058.21	......	1,058.21
Board allowances as part salary...........	......	......	......	......	$859.07	859.07
Sewage Plant............................	$2,500.00	......	$2,500.00	1,126.41	126.11	1,252.52
Operation of Sewage Plant................	......	......	......	21.90	2.50	24.40
Unclassified items........................	......	......	......	394.38	1.10	395.48
	$104,876.09	$15,083.99	$119,960.08	$97,255.38	15,083.99	$112,339.37
Cash balance Sept. 30, 1906.................	16,628.25	......	16,628.25	......	......	......
Cash balance Sept. 30, 1907.................	......	......	......	$21,898.96	......	$21,898.96
Student Deposits..........................	......	......	......	2,350.00	......	2,350.00
	$121,504.34	......	$136,588.33	$121,504.34	......	$136,588.33

*"Transfer" amounts represent transactions among the different College departments, and cover such items as labor and materials furnished one department by another.

CERTIFICATE OF AUDITORS

Hartford, Conn., Nov. 17, 1907.

This is to certify that we have examined the accounts of D. W. Patten, Treasurer of The Connecticut Agricultural College, for the year which ended Sept. 30, 1907, have compared the same with the vouchers therefor, and found them correct. We find the balance on hand in the different funds as follows, as evidenced by Bank Books:

Gilbert Fund	$1,920.34
State Fund	1,421.62
Morrill Fund	20,900.96
State and U. S. Fund	1,639.11
Land Grant Fund	24.28
	$25,906.31

WILLIAM P. BAILEY,
EDWARD S. ROBERTS,
Auditors of Public Accounts.

CHAPTER XXXV

An Act concerning Reports of State Institutions

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. It shall be the duty of the officers of each institution and commission of this State, who are required by law to report to the Governor or to the General Assembly, to give, in the financial statement of receipts and expenditures contained in their respective reports, a detailed statement of the salaries paid to each and every officer and employee for the year ending with the 30th day of September next preceding.

Section 2. This Act shall not apply to any officer or employee whose compensation is less than four hundred and fifty dollars per annum.

Approved, March 17, 1897.

Salaries of the Officers and Employees of the College who received more than Four Hundred and Fifty Dollars a Year, were paid at the annual rates, and from the College funds here named.

OFFICERS AND EMPLOYEES.	AMOUNT RECEIVED FROM EACH FUND.			Total[1]
	Morrill	Land Grant	State [5]	
R. W. Stimson.	$1,500	$1,000	......	$2,500[2]
L. A. Clinton.	1,500	......	......	1.500
A. G. Gulley	2,100	......	......	2,100
C. L. Beach.	1,100	......	......	1,100
J. M. Trueman.	1,200	......	......	1,200
C. K. Graham.	800	......	$200	1,000
E. H. Lehnert.	1,700	300	......	2,000[3]
E. A. White.	1,500	......	......	1,500
W. M. Esten.	700	......	......	700
C. A. Wheeler.	2,000	......	......	2,000
J. N. Fitts.	600	......	300	900[7]
H. R. Monteith.	1,800	200	......	2,000
E. O. Smith.	800	900	......	1,700
Alberta T. Thomas.	1,000	......	.....	1,000[6]
Virginia M. Sweet.	600	......	......	600[6]
Edwina M. Whitney.	......	700	......	700
G. H. Lamson.	800	100	......	900[7]
H. L. Garrigus.	400	......	420	820[4]
S. P. Hollister.	300	......	300	600[7]
E. D. Proudman.	......	900	600	1,500[6]
D. D. Kinne.	......	......	600	600[7]
C. H. Copeland.	......	......	540	540
David Brown.	......	......	474	474
H. T. Crane.	......	......	480	480

The above detailed report of salaries is made in obedience to the Connecticut law reprinted on the previous page.

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[1] Certain members of the Faculty who are also members of the Storrs Agricultural Experiment Station Staff receive additional compensation from the Station funds. See separate report.

[2] Also house with heat and light, and team.

[3] Also horse boarded.

[4] Also house and use of a horse.

[5] Amounts from the State Fund are in payment for service not chargeable to Federal funds.

[6] Also board and rooms.

[7] Also rooms.

UNIVERSITY OF ILLINOIS-URBANA
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